

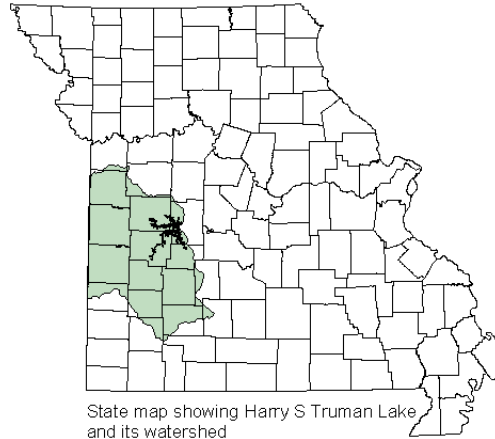
Missouri Department of Natural Resources

Total Maximum Daily Load Information Sheet

Harry S Truman Lake

Waterbody Segment at a Glance:

County: Benton
Nearby Cities: Warsaw
Area of impairment: 10,000 acres
Pollutant: Manganese
Source: Natural



State map showing Harry S Truman Lake and its watershed

TMDL Priority Ranking: Low

Description of the Problem

Beneficial uses of Truman Lake

- Livestock and Wildlife Watering
- Protection of Warm Water Aquatic Life
- Protection of Human Health associated with Fish Consumption
- Whole Body Contact (Swimming)
- Boating and Canoeing
- Drinking Water Supply

Use that is impaired

Drinking Water Supply

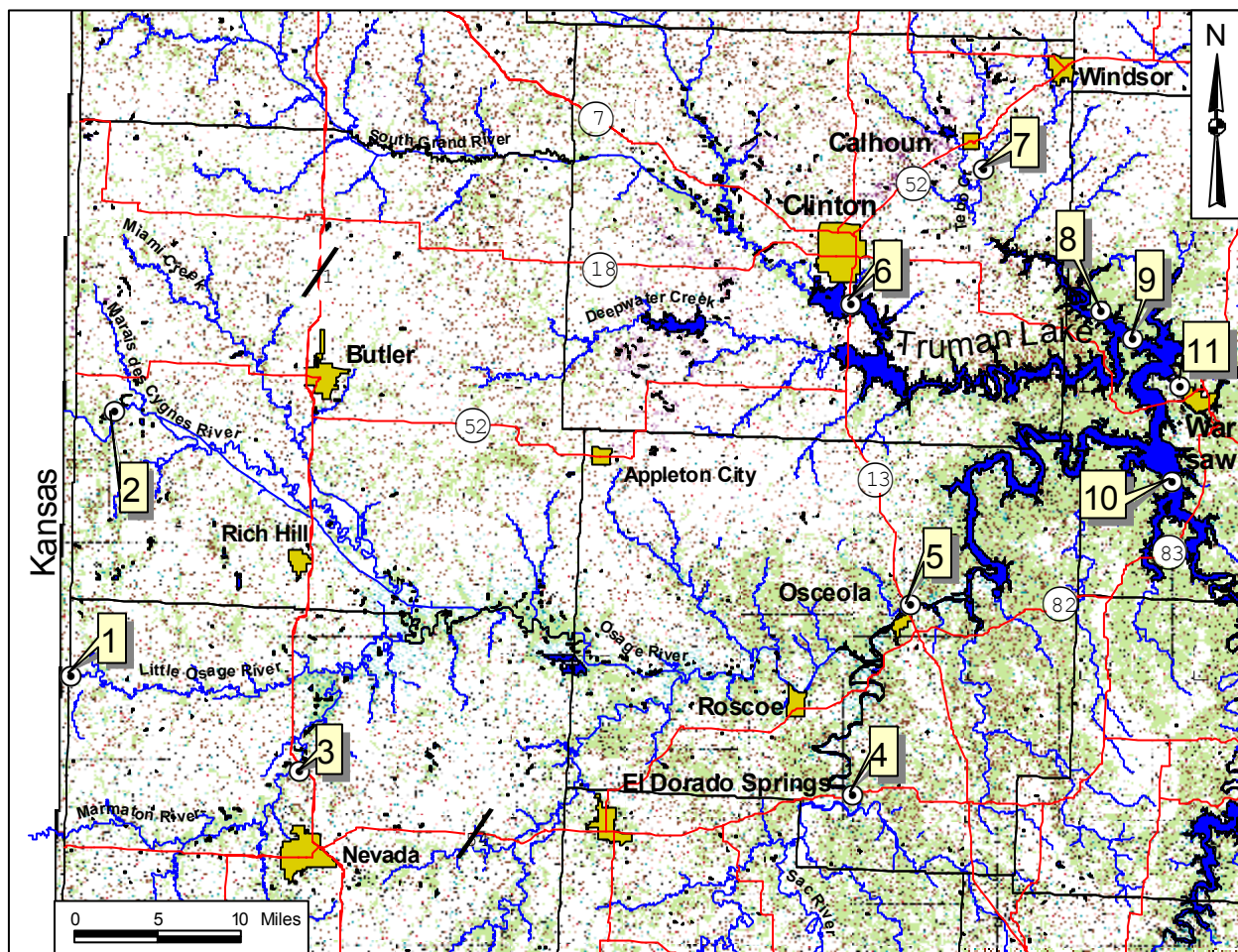
Standards that apply

Missouri Water Quality Standards in 10 CSR 20-7.031 Table A states as the maximum amount of manganese allowed in Drinking Water Supplies is 50 micrograms per liter ($\mu\text{g/L}$ or parts per billion). This is an aesthetic standard that seeks to protect a water supply against possible taste, odor and laundry staining problems caused by excessive amounts of manganese. Exceedence of this standard is not a threat to human health.

Truman Lake is located near Warsaw, Missouri, on the Osage River. The Truman Dam and Reservoir was authorized in 1954 as a flood control dam. It was originally called the Kaysinger Bluff Dam and Reservoir, but was renamed for the former president in 1970. Project construction began in August 1964 and was completed in October 1979. The reservoir has a surface area of about 56,000 acres and is the largest flood control lake in Missouri.

The Osage River arm of Truman Lake near Clinton is used as a drinking water supply source. Like all large reservoirs in Missouri, Truman Lake has periods of low dissolved oxygen levels in summer and early fall, except in the shallow waters near the surface of the lake. During these times, low levels of dissolved oxygen allow manganese, a common element in the area's soils and rock, to dissolve more readily into the lake water. Manganese does not present a human health threat, but is responsible for offensive tastes and appearances in drinking water. It can react with tannins in coffee, tea and other beverages, producing a black sludge that affects both taste and appearance. Manganese causes a brownish-black staining of laundry, porcelain fixtures, dishes, utensils and glassware. Soaps and detergents do not remove the stains and use of chlorine bleach can intensify the stains. Manganese can build up in pipelines, pressure tanks, water heaters and water softeners and cause equipment problems and energy cost increases due to mineral deposits. The manganese levels in Truman Lake are due to natural causes and there is no practical method for remediating this impairment. A graph of the data collected at the sites below may be found on the next page.

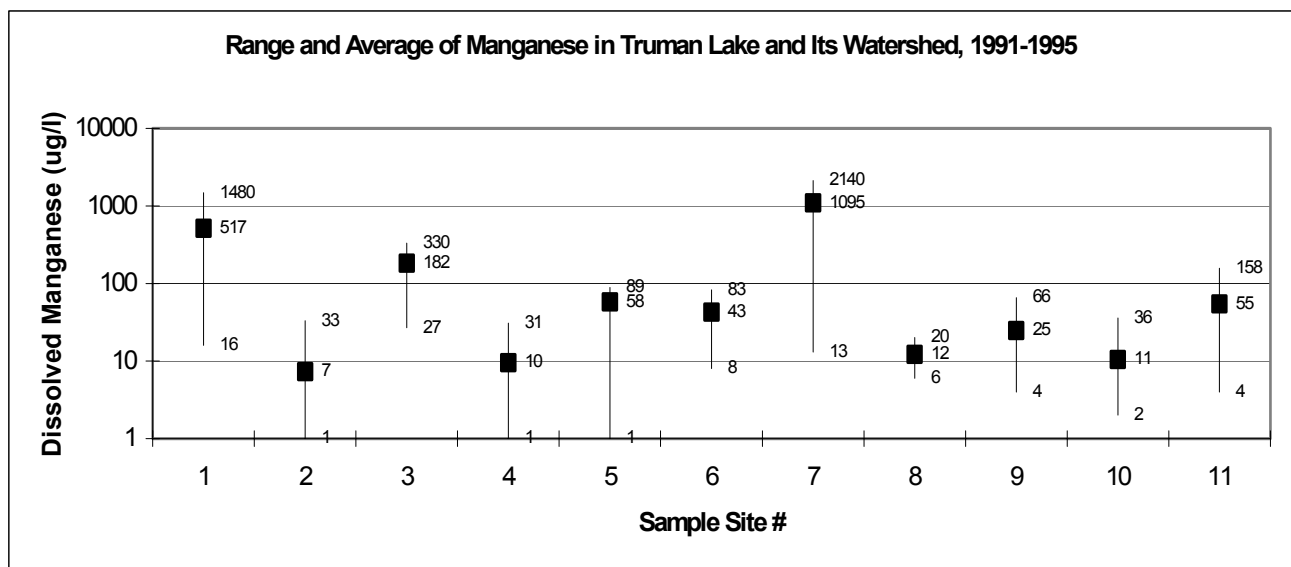
Harry S Truman Lake, Missouri, with Sampling Sites Identified



Key to site numbers on next page

Sample Site Index

- 1 – Little Osage River at State Line
- 2 – Marais des Cygnes River near Worland
- 3 – Marmaton River at Highway 71
- 4 – Sac River at Highway 54
- 5 – Osage Arm of Truman Lake
- 6 – South Grand Arm at Highway 13
- 7 – Tebo Creek 1 mile South of Calhoun
- 8 – Tebo Creek Arm of Truman Lake
- 9 – Four miles uplake from the dam
- 10 – Pomme de Terre arm of Truman Lake
- 11 – Osage River below Truman Dam



Source: U.S. Army Corps of Engineers

For more information call or write:

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Water Protection Program

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